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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/226,577	01/07/1999	JACK CHANEY	SAM1.0058	9866

7590

12/31/2002

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EXAMINER

MEISLAHN, DOUGLAS J

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/226,577

Applicant(s)

CHANEY, JACK

Examiner

Douglas J. Meislahn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 08 October 2002 that amended the specification and claims 1, 8, 17, 19, 25, and 30 while canceling claims 2 and 9.

Drawings

2. Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. While applicant is correct that the figure shows a system in which aspects of the present invention are implemented, the figure does not show any aspects of the present invention.

Response to Arguments

3. Applicant's arguments filed 08 October 2002 have been fully considered but they are not persuasive.

4. In response to applicant's argument that Berson is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Berson is generally in the field of cryptography. More specifically, Berson teaches a

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method of transmitting encrypted material so that a recipient can recover the cryptogram.

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. With respect to claims 6 and 13, applicant postulates that Girod does not teach reverse steps of unscrambling, reconvert, and decoding. But, applicant does not refute the arguments from the previous office action that showed these limitations in the prior art (see the last five lines of item 6 in the office action mailed 04 June 2002 and, in Girod et al., figures 1 and 2c and lines 7-10 of column 5).

7. Applicant makes broad allegations as to the patentability of claims 15, 16, and 19, but does not point to specific claim limitations that distinguish the claims from the cited prior art. Item 7 in the previous office action clearly indicates which elements of Muratani et al. anticipate the elements of the claims.

8. Applicant contends that elements of claims 2-5, 7, 9-12, and 14 are not taught or suggested. The cited sections of Berson and Girod et al render these limitations obvious. As an example, applicant points to language in claims 3, 4, 10, and 11. The limitations therein are rendered obvious by the cited section of Berson.

9. Applicant's arguments with respect to claims 17 and 18 (and later 25, 27, 30, and 31) ignore the official notice given to render obvious features of the claims. Support and motivation for inclusion of the claimed feature is given by the official notice.

10. With respect to claim 20, applicant says that Muratani et al. fail to show step b) because the reference does not generate copy protection data. On the other hand, applicant declares Muratani et al. generate a scramble key. Scramble keys are copy protection information because they are (being data) information that is used in preventing copying of an (unencrypted) file.

11. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the transmitted digital signal has not been scrambled) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Element d) is not taught in its entirety by Muratani et al., which is the reason for the inclusion of Schneier and Brundrett et al. See also item 5 of this office action.

13. Applicant treats Brundrett et al. separately from the other references and states that the examiner has not explained how the processes in the claims are similar to combined references. The following explains how the cited art meets the limitations. The difference between claim 20 and Muratani et al. is that applicant has moved process 54 (a scramble circuit in the set top unit) into the security module, where it operates on data that has been passed through process 72 (a descramble circuit).

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Copy protection information is supplied from the set top unit's element 62. The reason to move element 54 to a position after element 72 is given by Schneier, who says that data might be incoherently descrambled if the scramble functions are not commutative. As such, the scramble circuit 54 would necessarily be placed after element 72. It would be placed in the security module by the suggestion of Brundrette et al. At no point has the examiner intended to suggest that Muratani et al. suggest or teach scrambling or encrypting in the security module (although descrambling or decryption are inherently scrambling or encryption, but that is not currently relevant to the discussion of the claims). The examiner would appreciate applicant pointing out the origins of this misapprehension.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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15. Claim 15, 16, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Muratani et al. (6061451).

In Muratani et al., the security module (element 70 of figure 2) corresponds to applicant's descrambler module. Element 72 reads on a2) while reception of data from the set top unit (element 50) requires a communication interface, clause a1).

In the set top unit, sending data to the security module mandates a second communication interface. Element 52 demodulates incoming data and sends some of it to a key control circuit, which reads on b2i), and some to a scramble circuit, which reads on b2ii). Element 56, a descrambler that receives data from the key control unit, reads on clause b3). Element 60 reads on claim 16. Set top units anticipate audio-visual signals.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al. in view of Berson et al. (5742685).

In their abstract, Girod et al. teach watermarking a compressed signal. In figure 1, the lower input is a digital signal, which is compressed by element 10 (see lines 47-62 of column 3 and line 60 of column 4 through line 21 of column 5 for a description of figure 1), thereby reading on clause a) of the claims. Element 26 watermarks the

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compressed signal; the watermark is inserted using a frequency spreading signal, which meets applicant's data signal representing copy protection data, while the watermarking operations read on the copy protection function. In the abstract, Girod et al. say that encryption/decryption capabilities can be included but does not specify how or where. Claim 8 and figure 4 make it clear that encryption is applied after compression and watermarking. Encryption is a type of scrambling and so clause c) is met. The reversal of these steps is implied by figures 1 and 2c. While Girod et al. specifically disclose decoding preceding removal of the watermark, these steps are interchangeable, as is understood from lines 7-10 of column 5. This is part of the benefit of Girod et al.'s watermarking method. As described at the top of column 9, removal of the watermark requires the sequence that was used to embed the watermark. Girod et al. do not indicate how the receiver acquires the sequence. In lines 9-12 of column 4, Berson et al. teach appending a decryption key to a cryptogram in order to facilitate recovery of the encrypted information. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to facilitate removal of the watermark in Girod et al. by including the frequency spreading signal with the transmitted data as taught by Berson et al.

18. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muratani et al.

Lines 18-19 of column 5 present the security module as an IC card. Muratani et al. do not say that the security module is a PCMCIA card using an IS679 compatible interface. Official notice is taken that PCMCIA cards that use IS679 interfaces are old

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and well known. PCMCIA is a standard, and hence its use is common and beneficial. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a PCMCIA using a IS679 compatible interface in the system of Muratani et al.

19. Claims 20-24, 26, 28, 29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muratani et al. in view of Schneier (Applied Cryptography) and Brundrett et al. (6249866).

In figure 2, Muratani et al. show a set top unit (element 50) and security module (element 70). Data going into element 52 from the network is scrambled and reads on clause a) of claim 20. Some of this data is sent to the key control circuit, which generates a key, which meets the limitations of clause b). Data is transmitted from the set top unit to the security module, covering clause c). Regarding clause d), element 72 in the security module descrambles data. Clause f) is met when data still protected by the scrambling done in element 54 is returned to element 56 in the set top unit. The descrambling in element 56 shows clause g).

Muratani et al. do not say that the security module applies copy protection using the data generated in step b). On pages 516 and 517, Schneier explains Shamir's Three-Pass Protocol, a derivation of which is the foundation of Muratani et al.'s system. As told in Schneier, the system relies on the cipher algorithms being commutative. That some algorithms are not commutative presents a potential pitfall to Muratani et al.'s apparatus. In lines 47-50 of column 1, Brundrett et al. teach the common practice of decrypting data with a first key, re-encrypting it with a different key, and sending it to a

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recipient. Therefore it would have been obvious to maintain security in transmissions between the set top unit and security module while avoiding miscommunication caused by non-commutative algorithms by decrypting data in the security module and then re-encrypting it with a key known to the recipient (the set top box in this case) as shown in Brundrett et al.

The key control circuit in figure 2 of Muratani et al. and its operations covers the material in claim 21. Coverage of claim 22 is an extension of this placement of element 62 in the set top unit. Element 60 in the set top unit is a decoder, which implies that data is encoded, thereby showing claims 23 and 24. Claims 25, 27, 30, and 31 are rejected on the same grounds as claims 17 and 18.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Douglas J. Meislahn
Examiner
Art Unit 2132

DJM
December 18, 2002

Matthew B. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2134